

# **Multilevel Converter Based Intelligent Universal Transformer**

## **ABSTRACT OF THE DISCLOSURE**

**[0062]** A multilevel converter-based, intelligent, universal transformer includes back-to-back, interconnected, multi-level converters coupled to a switched inverter circuit via a high-frequency transformer. The input of the universal transformer can be coupled to a high-voltage distribution system and the output of the universal transformer can be coupled to low-voltage applications. The universal transformer is smaller in size than conventional copper-and-iron based transformers, yet provides enhanced power quality performance and increased functionality.